

REMARKS

I. Status Of Application

Claims 1-30 are pending in the application; the status of the claims is as follows:
Claims 3, 4 and 7 are allowed;

Claims 19-22, 25 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form;

Claims 1, 2, 5, 6, 8-11, 13, 16, 18 and 28-30 are rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,515,080 to Nakamura et al (hereinafter "Nakamura") in view of U.S. Patent No. 6,317,189 to Yuan et al (hereinafter "Yuan");

Claim 15, 23, 24 and 26 are rejected under 35 U.S.C. § 103(a) over Nakamura in view of Yuan, and further in view of U.S. Patent No. 5,133,076 to Hawkins (hereinafter "Hawkins"); and

Claims 12, 14 and 17 are rejected under 35 U.S.C. § 103(a) over Nakamura and Yuan in view of U.S. Patent No. 5,757,365 to Ho (hereinafter "Ho").

Drawings

To date, no Notice of Draftsperson's Patent Drawing Review has been received. Applicants respectfully request receipt of this document when it becomes available. Please note that the original drawings filed in the patent application are "formal" drawings.

Examiner's Interview

Applicants respectfully thank the Examiner for granting an Interview on October 16, 2002, wherein the claims and cited prior art references were discussed. Applicants agree with the Examiner that the prior art cited in the previous Office Actions, either singly or in any combination, does not render any of the claims of the present application obvious.

Claim Amendments

Claims 1, 15, 16, and 28 have been amended to more particularly point out and distinctly claim the invention. No new matter was added. Claims 17 and 18 have been amended to provide proper antecedent basis or to correct minor errors in grammar which do not affect the scope of the claims. Claims 19, 20, 25, and 27 have been rewritten in independent form to include all of the limitations of the original base claim and any intervening claims. No new matter was added.

New Claim 31-46

Claims 31-34 have been added to provide a more adequate basis of protection of the invention. Claims 31 – 34 respectively correspond to claims 19, 20, 25, and 27 prior to their being rewritten in independent form. New claim 35-46 have been added to provide a more adequate basis of protection of the invention. No new matter was added.

Claim Objections

The objection to claims 19-22, 25 and 27 as being dependent upon a rejected base claim, but allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, is noted with appreciation. Claims 19, 20, 25 and 27 have been rewritten in independent form to include all limitations of the base claim and all intervening claims. It is respectfully pointed out that claims 21 and 22 depend from claim 7, which is indicated in the present Office Action as being allowed. Accordingly, claims 21 and 22 were not rewritten in independent form, and are considered to be allowable.

Therefore, it is respectfully requested that the objection to claims 19-22, 25 and 27 be reconsidered and withdrawn.

35 U.S.C. § 103(a) Rejections

A. Claims 1, 2, 5, 6, 8-11, 13, 16, 18 and 28-30

The rejection of claims 1, 2, 5, 6, 8-11, 13, 16, 18 and 28-30 under 35 U.S.C. § 103(a) over Nakamura in view of Yuan is respectfully traversed based on the following.

As was discussed and agreed upon during a telephone Interview conducted with the Examiner on October 16, 2002, none of the claims of the present invention are rendered obvious with respect to Nakamura either singly or in combination with Yuan.

Accordingly, it is respectfully requested that the rejection of claims 1, 2, 5, 6, 8-11, 13, 16, 18 and 28-30 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

B. Claims 15, 23, 24 and 26

The rejection of claims 15, 23, 24 and 26 under 35 U.S.C. § 103(a) over Nakamura in view of Yuan, and further in view of Hawkins, is respectfully traversed based on the following.

As was discussed and agreed upon during a telephone Interview conducted with the Examiner on October 16, 2002, none of the claims of the present application are rendered obvious with respect to Nakamura either singly or in combination with Yuan, and further in view of Hawkins.

Accordingly, it is respectfully requested that the rejection of claims 15, 23, 24 and 26 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

C. Claims 12, 14 and 17

The rejection of claims 12, 14 and 17 under 35 U.S.C. § 103(a) over Nakamura and Yuan in view of Ho is respectfully traversed based on the following.

As was discussed and agreed upon during a telephone Interview conducted with the Examiner on October 16, 2002, none of the claims of the present invention are rendered obvious with respect to Nakamura, Yuan, or Ho either singly or in combination.

Accordingly, it is respectfully requested that the rejection of claims 12, 14 and 17 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

New Claims

For the same reasons as provided during the telephone interview of October 16, 2002 regarding claim 1-30, none of new claims 31-46 are rendered obvious over the Nakamura patent, the Yuan patent, the Hawkins patent, or the Ho patent either singly or in any combination.

Accordingly, it is respectfully requested that claims 31-46 be allowed.

CONCLUSION

In view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Amendment increases the number of independent claims by 8 from 5 to 13 and increases the total number of claims by 16 from 30 to 46, but does not present any multiple dependency claims. Accordingly, a Response Transmittal and Fee Authorization form authorizing the amount of \$960.00 to be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260 is enclosed herewith in duplicate. However, if the Response Transmittal and Fee Authorization form is missing, insufficient, or otherwise inadequate, or if a fee, other than the issue fee, is required during the pendency of this application, please charge such fee to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260.

If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The following is a marked-up version of the changes to the claims which are being made in the attached response to the Office Action dated June 25, 2002.

IN THE CLAIMS:

New Claims 31-46 have been added.

1. (Thrice Amended) A liquid crystal display device comprising:
a liquid crystal display which uses reflective type liquid crystal with a memory effect;
a driving circuit which performs writing on the liquid crystal display;
a power supply circuit which supplies electric power to the [driving-circuit;]
driving circuit, the power supply circuit including one element selected from the group consisting of a booster circuit and a DC/DC converter; and
a controller which inactivates at least part of the power supply circuit after writing on the liquid crystal display.

2. (Twice Amended) A liquid crystal display device according to claim 1, [wherein:
the power supply incorporates a booster circuit; and] wherein, if the power supply circuit includes a booster circuit, the controller inactivates the booster circuit after writing on the liquid crystal display.

15. (Twice Amended) A portable electronic device comprising:
a liquid crystal display which uses reflective type liquid crystal with a memory effect;
a driving circuit which performs writing on the liquid crystal display;

a power supply circuit which supplies electric power to the driving [circuit;]
circuit, the power supply circuit including one element selected from the group consisting
of a booster circuit and a DC/DC converter;

a controller which inactivates at least part of the power supply circuit after writing
on the liquid crystal display; and

a casing which encases the liquid crystal display, the driving circuit, the power
supply circuit and the controller.

16. (Twice Amended) A method for driving a liquid crystal display device
provided with a liquid crystal display which uses reflective type liquid crystal with a
memory effect, said method comprising the step of:

after writing on the liquid crystal display, inactivating at least part of a power
supply circuit which supplies electric power to a driving circuit which performs writing on
the liquid crystal [display.] display, the power supply circuit including one element
selected from the group consisting of a booster circuit and a DC/DC converter.

17. (Once Amended) A [driving method] method for driving a liquid crystal
display device according to claim 16, wherein at least part of the power supply circuit is
inactivated immediately after writing on the liquid crystal display.

18. (Once Amended) A [driving method] method for driving a liquid crystal
display device according to claim 16, wherein at least part of the power supply circuit is
inactivated a specified time after writing on the liquid crystal display.

19. (Once Amended) A portable electronic device [according to claim 15,]
comprising:

a liquid crystal display which uses reflective type liquid crystal with a memory
effect;

a driving circuit which performs writing on the liquid crystal display;
a power supply circuit which supplies electric power to the driving circuit;
a controller which inactivates at least part of the power supply circuit after writing
on the liquid crystal display; and

a casing which encases the liquid crystal display, the driving circuit, the power supply circuit and the controller,

wherein the controller also inactivates at least part of an internal circuit of [the] a data processing unit after writing on the liquid crystal display.

20. (Once Amended) [A driving method according to claim 16,] A method for driving a liquid crystal display device provided with a liquid crystal display which uses reflective type liquid crystal with a memory effect, said method comprising the steps of:

after writing on the liquid crystal display, inactivating at least part of a power supply circuit which supplies electric power to a driving circuit which performs writing on the liquid crystal display, the power supply circuit including one element selected from the group consisting of a booster circuit and a DC/DC converter, and

[further comprising the step of] inactivating at least part of an internal circuit of a data processing unit which is connected to the driving circuit.

25. (Once Amended) A portable electronic device [according to claim 24, wherein:] comprising:

a liquid crystal display which uses reflective type liquid crystal with a memory effect;

a driving circuit which performs writing on the liquid crystal display;
a power supply circuit which supplies electric power to the driving circuit;
a controller which inactivates at least part of the power supply circuit after writing on the liquid crystal display; and

a casing which encases the liquid crystal display, the driving circuit, the power supply circuit and the controller,

wherein the liquid crystal display includes a pair of substrates accommodating the reflective type liquid crystal therebetween, and

wherein at least one of the substrates is flexible.

27. (Once Amended) A portable electronic device [according to claim 15, wherein:] comprising:

a liquid crystal display which uses reflective type liquid crystal with a memory effect;

a driving circuit which performs writing on the liquid crystal display;

a power supply circuit which supplies electric power to the driving circuit;

a controller which inactivates at least part of the power supply circuit after writing on the liquid crystal display; and

a casing which encases the liquid crystal display, the driving circuit, the power supply circuit and the controller,

wherein the reflective type liquid crystal includes a plurality of display areas.

28. (Twice Amended) A liquid crystal display device comprising:

a liquid crystal display which uses reflective type liquid crystal with a memory effect;

a driving circuit which performs writing on the liquid crystal display;

a data processing unit which is connected to the driving circuit;

a power supply circuit which supplies electric power to the driving circuit and the data processing [unit;] unit, the power supply circuit including one element selected from the group consisting of a booster circuit and a DC/DC converter; and

a controller which inactivates at least part of the power supply circuit and/or at least part of an internal circuit of the data processing unit after writing on the liquid crystal display, thereby inhibiting electric power supply to the liquid crystal display.